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David J. Scarborough

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EXAMINER

WONG, LUT

ART UNIT

PAPER NUMBER

2129

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/921,993	<b>Applicant(s)</b> SCARBOROUGH ET AL.	
	<b>Examiner</b> LUT WONG	<b>Art Unit</b> 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-12,15,17,21,23,25-30,32-34,37,40,41 and 43-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-12,15,17,21,23,25-30,32-34,37,40,41 and 43-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/19/2007, 1/08/2008, 1/24/2008</u> .                        | 6) <input type="checkbox"/> Other: _____                          |



### **DETAILED ACTION**

This office action is responsive to an AMENDMENT entered Nov 19, 2007 for the patent application 09/921993

The non-final Office Action of May 21, 2007 is fully incorporated into this Office Action by reference.

### ***Status of Claims***

Claims 1-2, 5-12, 15, 17, 21, 23, 25-30, 32-34, 37, 40-41, 43-45 are pending.  
Claims 1, 2, 15, 23, 25, 37, 40, 41, 43 have been amended. Claims 44-45 are new.  
Claim 22 has been cancelled.

### ***Response to Arguments***

Applicant's amendment has overcome claim objection and 112 2<sup>nd</sup> rejections.

### ***Information Disclosure Statement***

The information disclosure statement filed 11/19/2007, 1/08/2008, 1/24/2008 fails to comply with 37 CFR 1.97(c) because it lacks a statement as specified in 37 CFR 1.97(e). It has been placed in the application file, but the information referred to therein has not been considered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-2, 5-12, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirby et al, and further in view of Decision Point Data (DPD), Inc, and evidenced by Morrow et al ("Using Absenteeism and Performance to Predict Employee Turnover: Early Detection through Company Records").**

Claims 1-2, 5-12: See previous office action and response below.

Claim 44: tracking whether the applicant has been dropped from payroll is immaterial. Even if it is, one skill in the art would know that company data shows whether someone is still employed or being dropped out (See e.g. abstract of Morrow).

### ***Response to Arguments***

Applicant's arguments, see pgs. 14-15, filed Nov 19, 2007 have been fully considered but they are not persuasive.

In re pgs 14-15, applicant argues that neither Kirby nor DPD teaches the amended limitations of claims 1 and 2. Hence, the combination is non obvious.

In response,

1) The Examiner contends that the amended limitation has limited patentable weight because the limitations are non-functional descriptive material (i.e. weather the performance data are determined from payroll data or any other method are non functional distinct as long as they are collected"). The fact that applicant uses "wherein" clause already suggested that the amended limitations are optional. See MPEP 2106 IIC. The applicant may wish to explain how this added wherein clause changes the method of constructing a model.

2) Even if it is material to patentability, it would have been obvious to one of ordinary skill in the art at the time of the invention that determining employment duration from payroll data is notoriously well known because first, it is notoriously well known to calculate the "tenure" from the date of termination to the date of hiring, and second the date of hire and the date of termination are available in the payroll data/record. Again, the applicant may wish to explain how this added wherein clause changes the actual method of constructing a model.

3) Morrow shows using company record data to determine hiring period (See e.g. abstract of Morrow).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 15, 17 and 21, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirby et al, and further in view of Mark John Somers "Application of two neural network paradigms to the study of voluntary employee turnover" 1999).**

### ***Response to Arguments***

Applicant's arguments, see pg. 16--17, filed Nov 19, 2007, with respect to the rejection(s) of claim(s) 15, 15, 21 under 102(b) over Kirby have been fully considered

and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Somers.

Claim 15: Kirby teaches testing effectiveness of different optimization techniques, such as neural network versus stochastic methods, for employment prediction. Kirby fails to call for testing between two different feed forward neural networks, as amended in claim 15.

However, Somers teaches studying the performance of two different neural networks (See e.g. title of Somers). It would have been obvious to one skill in the art that in addition to testing neural network versus traditional method (See e.g. Somers' abstract), it would also be beneficial to see how different neural network models performs (See e.g. Somers' abstract).

Dependent claims 17, 21 are addressed in the previous office action.

Claim 45: note that the limitations of "comparing across gender, ethnicity, or age differences" are non-functional descriptive material. It does not change the method nor compute program. Even if the limitation was not non-functional descriptive material, claim 45 is nothing more than a sensitivity analysis (i.e. identifying which input variables, such as gender, age, that are not important to the output prediction). See e.g. Somers "Data analysis" section.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirby et al, and further in view of Kaak et al, as set forth in the previous office action for reason of record, and evidenced by Morrow et al ("Using Absenteeism and Performance to Predict Employee Turnover: Early Detection through Company Records").**

***Response to Arguments***

Applicant's arguments, see pg. 17, filed Nov 19, 2007 has been fully considered but they are not persuasive.

In re pg. 17, applicant argues that claim 23 is not obvious for the same reason as claim 1.

In response, see the response to claim 1 above.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 25-30, 32-34, 37, 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirby et al, in view of Kaak et al, and evidenced by**



**Morrow et al ("Using Absenteeism and Performance to Predict Employee Turnover: Early Detection through Company Records").**

***Response to Arguments***

Applicant's arguments, see pgs. 18-19, filed Nov 19, 2007, with respect to the rejection(s) of claim(s) 25 under 103(a) over Kirby and Kaak have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Morrow.

**Claim 25, 37 and 41**, The combination of Kirby and Kaak teaches job effectiveness criteria (see the previous office action). Kirby and Kaak fails to particularly called for predicting "whether the job applicant will be involuntarily terminated, and whether the job applicant will be eligible for rehire upon termination". However, it is well known in the art that such criteria is used to predict rehiring or firing. Morrow reference is a good evidence that involuntary turnover and rehires are prediction criteria (See e.g. pg. 359 of Morrow). In other words, Morrow shows that using performance data to predict firing or rehiring decision (See e.g. abstract).

Dependent claims 26-30, 32-34, 43 are addressed in the previous office action.

Note for claim 41: It would have been obvious to one skill in the art to have an apparatus comprising: an electronic device; means for storing; means for predicting; means for outputting. Such apparatus is nothing more than, for example, a personal computer with some software, which is well known to one skill in the art. See MPEP 2114 [R-3].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirby et al, in view of Kaak et al, and further in view of DPD, as set forth in the previous office action for reason of record.**

***Response to Arguments***

Applicant's arguments, see pgs. 19-20, filed Nov 19, 2007 has been fully considered but they are not persuasive.

In re pg. 19-20, applicant argues that claim 40 is not obvious for the same reason as claim 25

In response, see the response to claim 25 above.

Note for claim 40: It would have been obvious to one skill in the art to have an apparatus comprising: computer readable medium; electronic data interrogator means; electronic answer capturer means; electronic predictor means; electronic result provider means. Such apparatus is nothing more than, for example, a personal computer with some software, which is well known to one skill in the art. See MPEP 2114 [R-3].

Applicant should consider a system claim instead of apparatus claim.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lut Wong whose telephone number is (571) 270-1123. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent David can be reached on (571) 272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2129

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Lut Wong/

Examiner, Art Unit 2129

/David R Vincent/

Supervisory Patent Examiner, Art Unit 2129